

**APRIL, 1939** 



Australasian Engineering Equipt. 370 LITTLE COLLINS STREET - - - - MELBOURNE

## AMATEUR RADIO

Published by the Wireless Institute of Aust., Victorian Division. Law Court Chambers, 191 Queen Street, Melbourne, C.1.

Vol. 7 No. 4

1st APRIL, 1939

#### INDEX

Editorial		28 and 56 M.C. Notes 12
A Flexible and Stable E.CC.C. Oscillator		VK3MR's DX Notes 14 Divisional Notes—
Cathode Modulation	6	N.S.W
World Radio Tour with VK3MR	8	Queensland 21
Correspondence		South Australia 22
Contests Section		West Australia 25
Federal and Victorian Q.S.L. Bureau		Tasmania
Dureau	11	New Guinea 26

#### Divisional Addresses:-

TOTAL
FEDERAL HEADQUARTERS BOX 2127L, G.P.O., SYDNEY
NEW SOUTH WALES BOX 1784JJ, G.P.O., SYDNEY
VICTORIA BOX 2611W, G.P.O. MELBOURNE
QUEENSLAND BOX 1524V, G.P.O. BRISBANE
WEST AUSTRALIA—
ROOMS 2 & 3, MELBA CHAMBERS, Cor. HAY and MILLIGAN
STREETS, PERTH.
SOUTH AUSTRALIA BOX 284D, G.P.O., ADELAIDE TASMANIA BOX 547E, G.P.O., HOBART
TASMANIA BOX 547E, G.P.O., HOBART

#### Magazine Committee:-

Editor—W. R. GRONOW (VK3WG).

Technical Editor—R. H. CUNNINGHAM (VK3ML); Notes—C. SERLE (VK3RX);

Compilation—V. E. MARSHALL (VK3UK);

Secretary—T POWERS (VK3PS)

All Communications and MSS. should be forwarded to the Editor, "Amateur Radio," BOX 2611W, G.P.O., MELBOURNE.

Subscription to "Amateur Radio" is 6/- per Annum (Post Free), paid in advance.

Should you not receive your copy of "Amateur Radio," notify your Divisional

Secretary at once.

Advertising and Publishing Office: Address Publicity Manager, "Amateur Radie,"
Whitehorse Road, Box Hill, E.11. 'Phone: WX 2429.

NOTE.—ADVERTISERS' CHANGE OF COPY MUST BE IN HAND NOT LATER THAN THE 20th OF THE MONTH PRECEDING PUBLICATION.

Submit Your Instrument Problems to us



# SIEMENS ELLIOTT INSTRUMENTS

For Every Requirement

## SIEMENS (Australia) Pty. Ltd.

SYDNEY

MELBOURNE

BRISBANE

ADELAIDE

NEWCASTLE

H. C. Little & Co. Perth: W. & G. Genders Ptv. Ltd. Tasmania

ents for THE ENGLISH ELECTR IC CO. LTD., LONDON.

### Amateur Radio



# **EDITORIAL**

The Editorial of QST for February gives one food for serious thought. Every ham, no matter how dumb. knows the fact that a radio transmitter is a potential lethal machine. yet hardly one of us has not at some time put our hands into the "vitals" with the power turned on. Many of us have boasted of having received "so many hundred volts shock." we have all laughed at the "wisecrack" of measuring high voltage on the basis of a hundred volts for every foot the jolt throws you. It is all very funny until something serious happens and the thing that really gets under the skin in the case cited in QST is that the power pack that killed W9VYU was not the big high voltage pack, but merely the speech amplifier supply. Many who read and grieved over the tragic news of the loss of Ross Hull felt, "of course he hadn't a chance, it was a high voltage pack, thousands of volts"; true, but this case is one where a combination of circumstances likely to be met in any ham's activity caused death from 500 volts.

Some of the power supply arrangements in our transmitters are excellent, some are fair and some are frankly courting disaster. Admittedly we are not permitted to use sufficiently high power to require power supplies running to outputs of thousands of volts, but few of us indeed do not possess a 500 volt supply. If, on reading of that tragedy men-tioned, you did not go out to the shack and look your own transmitter over to see what its safety possibilities or otherwise were, we suggest you do so now and take with you. as we have done, that phrase from QST, "Get safety conscious, AL-WAYS BE CAREFUL."

#### FEDERAL CONVENTION.

Melbourne will be the venue of a large number of Hams at Easter. for the Federal Convention which will be held over the holiday period will be the excuse, if one were needed, for a first class "Hamfest." On Easter Saturday night the Vic-torian Division will hold its annual dinner at which the guests will include Mr. Malone, the Chief Inspector of Wireless, and other members of the Radio Inspectors' Department as well as the delegates from the various divisions. If you have not already made arrangements to spend your holidays in Melbourne this Eastertide, we suggest you can certainly be promised a right royal time if you can possibly make the trip.

#### R.A.A.F. RESERVE W/T SEC.

We understand that enrolments in the reorganised R.A.A.F. Wireless Reserve are pouring in from all over the country. If you have not sent in your application and are desirous of joining, do not delay or you may be too late. As we mentioned in this column last month, membership in the Wireless Reserve offers a wonderful opportunity for Amateurs who are not already serving in another branch of the Forces to join a unit composed solely of radio amateurs. In brief, the qualifications are physical fitness, enthusiasm and a reasonably high standard of operating ability.

# A Flexible and Stable E.C.\_C.C. Oscillator

(By W. T. S. Mitchell, VK3IIM.)

is towards crystal control, a stable electron-coupled oscillator is a worthy addition to the crystal control

The oscillator to be described is a combined E.C. and C.C. oscillator using a type 6V6G beam tetrode, the change-over from one to the other being accomplished by a single D.P.D.T. switch. The average han cannot afford enough crystals to cover the entire band, but he can do this by incorporating an E.C. oscillator which is, without a doubt, a very useful adjunct, especially in hopping a few kes to avoid QRM and finish a QSO which otherwise would have been lost.

Operation.

In the C.C. position of SW1, and SW3 open, the 646G operates in a tritet circuit, and 80 and 40 metre crystals can be used with perfect safety providing the pointers listed later are observed. By now closing SW3 (which may be a bent-over rotor plate on C1), the 646G becomes a straight pentode oscillator. The coil L1 is used for both tritet and E.C. operation. L2 may be of such inductance in conjunction with C2, to cover any two bands, i.e., 80 and 40 or 40 and 20.

Using an 80 mx crystal, the oscillator gives excellent output on 80

or 40 and reduced output quadrupling to 20. With a 40 m crystal, good output on 40 and 20, and sufficient output on 10m to drive another beam tube. In the E.C. position, the cathode is at approximately 65m and the plate at 40 m. By winding L1 to tune to approx. 20 and L2 at 10 m or 10 and 5, good output should be obtainable. Refer to article by VK2NO in February, 1937, Amateur Radio, page 8.

All values of resistances, condensers, etc., are as shown and these values should be followed closely. Coils Li must be wound to exact specifications or trouble may be experienced with instability. A word about wire for coils—don't use tinned wire. The surface resistance of tinned wire is very high and R.F. losses are high. This was noticed in the writer's own rig, where the only alteration was the replacing of tinned wire by enamelled wire, and the wattage increased by I watt.

One cannot overstress the importance of good quality parts in a transmitter, and in this oscillator, especially for good stability, they are desirable.

The following pointers should be adhered to if building this unit:—

(1) A well regulated power supply with choke input is the nucleus of

# ANOTHER SCOOP! The Chamberlain-Bassett Research Corporation

Of Chicago, announces the appointment of

# R. H. CUNNINGHAM & CO.

94 Robinson Road, Hawthorn, Vic.

As their Factory Representatives and Distributors for the BASSETT

As their Factory Representatives and Distributors for the BASSETT CONCENTRIC FEEDERS. . impervious to rain, snow and sleet From 13 to 64 ohms. From 1 to 1000 watts.

As flexible as rope and simple to install.

Send for Bulletin 70X.

the oscillator's stability (2) For 6V6G keen the screen voltage at 150 or below and the plate voltage at 300 or below. (3) Use heavy gauge wire for all wiring, i.e. 14 or 16 gauge bare or enamelled (4) Ground all earth returns, bypasses, etc., to a common point on the chassis. (5) Use a precision vernier dial on the cathode condenser C1. (6) Do not use E C on fundamental Always double for greatest stability Don't use tritet on fundamental. (7) Calibrate your vernier dial from a reliable source to simplify setting E.C.O. in

Although to-day the general trend the band. (8) Don't swish your E.C.O. across the band. Set it before you turn on the H.T. (9) Use an aluminium plate condenser C1 to

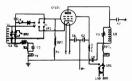
avoid frequency drift.

#### Tuning.

Although tuning of tritet oscillators is found in most text books, a refresher would not go amiss. To tune the tritet oscillator with H.T. on, the cathode condenser CI is decreased in capacity until a dip occurs in plate current. C2 is tuned to resonance, and then C1 is decreased still more to a point where the grid drive begins to fall. At this point the output is greater and the crystal current less. With a 100 ma. pea lamp at F, the crystal current is not sufficient to make the pea lamp glow even with a 40 m crystal.

Tuning the E.C.O. is similar to the tritet, but wherever the setting of C1, oscillation occurs. Tune C2 to resonance for max, grid drive. The plate condenser C2 is not very critical as regards frequency, and a shift of 10 to 15 kc may be made either way with C1 without resetting C2. If the E.C.O. is calibrated with the crystal in its socket, a slight change of frequency will occur with the crystal of the condense of the conden

The above oscillator has been in use at this station for over six months and in that time over 500 gSO's have only shown an occasional report less than T9X! Furthermore, this oscillator, E.C. and C.C., has always been keyed with a bug at J1, without chirps or bloops, and makes breakin operation and general DX work a real pleasure.



Parts. C1, 2—100 mmfrd variable isolan-

tite condensers.
C3.—.00025 mmfd mica fixed.

C4, 9.—.0001 mfd mica fixed. C5, 6, 7, 8.—.01 mfd mica fixed. R1.—400 W.W.resistor.

R2.—100000 carbon resistor. RFC.—2.5mh R.F. chokes. J1, 2.—Closed circuit jacks.

SW1.—Closed circuit jacks. SW1.—D.P.P.T. toggle switch. SW2.—D.P.S.T. toggle switch.

SW3.—See text.

F.—100 ma. pea lamp and holder. L2.—See text (inductance between 30 mh. and 14 mh. for 80 and 40 m.)

L1.—80 m 11.5 turns, 2.1 turns cath. tap, .75" winding space, 20 g. enam. 40 m, 5.5 turns, 1.1 turns cath tap, .75" winding space, 20 g. enam.

All coil formers 11 in. diameter ribbed.

Note.—Screen voltage should be taken from bleeder in power supply.

#### Have the

## Elsum Printing Co.

do your

## **QSL Cards!!**

prices in previous copies of "Amateur Radio"

•

SE'D COPY AND RE-

Elsum Printing Coy.

1025-7 Whitehorse Rd.
Box Hill. E.11

### Amateur Radio

### Cathode Modulation

(By J. B. Hourigan, VK3SG.)

This article is a description of an as I know, a novel system of modulation. It is definitely a form of grid modulation but grid modulation without most of the snags that grid modulation seems to possess, plus an efficiency that as regards the 807 particularly, is as high as plate modulation.

It may be of interest to give a brief outline of how I came to evolve the scheme, because up to the time I used it. I had never heard of anyone using it, and only since then have I been told that it has been used on modulated oscillators of low power on 5 metres. In the course of trying to get grid modulation working stably I had tried various systems. principally the idea where self bias is used in the cathode of the modulated amplifier to keep the grid constantly negative, with a consequent increase of efficiency. After much hard thinking it occurred to me. why not put the modulation transformer in the cathode circuit and use the audio voltage developed across the secondary of the transformer as the necessary bias to maintain stable operations. My idea was to try and get the operation condition of the stage up to or near class C. Well. my expectations were more than realised. At that time I was using a pair of 45's in push pull in the final; under straight grid modulation 2 mills of grid current was all that I could use. With cathode modulation that figure went up to nearer 8 mills with a resultant big increase in output. In the rig to be described I am not using the 45's in the final, but a single 807. I hope at a later date to be able to give details of operating conditions of other types of tubes such as an 809 and possibly a tube with a low amplification factor. However, since it works on a low mu triode, and a high mu penthode, it will probably be just as efficient with any tube. However, that remains to be seen.

It will be seen that the 807 stage is quite straightforward with the exception that it is neutralised. However, as the tube is one of the older type, and also the layout of the stage is not the best, this was done to be on the safe side.

The only really critical point about the whole scheme is the modulation transformer, the secondary imped-ance of which is very low, in the region of 450 to 500 ohms. One suggestion for a transformer for anyone who cares to try the idea out experimentally is to use a power transformer. The whole of secondary winding is used as the primary, and the primary winding is used as secondary. This works out well where a 45 tube is used as a modulator, but if a 2A5 is used the modulator output is not the best. and a falling off in quality is annarent

It will be seen that 50 volts of fixed bias is used. This again is not very critical, and may be subject to some adjustment by individual users. The only point to watch out for is to see that the tube is not overdriven. The 807 is extremely easy to overdrive, and the rated grid current should not be exceeded. Overdrive evidences itself by giving downward modulation. One point I have noticed in the operation of the stage is an apparent contradiction. is upward modulation of the antenna current and a slight downward kick of the plate meter. This only happens when the stage is adjusted right up to a maximum and has no

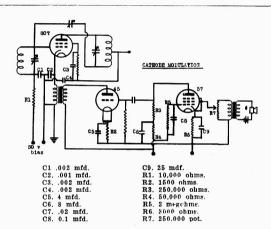
# SUPPORT YOUR ADVERTISERS

#### Amateur Radio

effect on quality and output. The downward kick of the plate meter is only in the region of 5 mills. This effect is probably accounted for by the fact that the secondary voltage on the modulation transformer is acting as extra bias and would on peaks reach a value which would tend to reduce the plate current of the tube. Another point to watch is

antenna coupling, which should be fairly tight.

In conclusion I would like to say that the efficiency of the stage is well up to that of a stright unmodulated Class C stage as the output is a good 20 watts of r.f. for an input of 30 watts, whilst depth of modulation is all that could be required.



## HAMS!!

We can supply all your requirements. Write or call for Price Lists.

Victorian Distributors for Eddystone Products.

				1	N	ш	и	w	1	,	Ц	٧	ш	ĸ	٠.											
Octal Frequentite	S	ю	c	k	æ	t	3																	2	1/9	
Condenser Cradle																										
B.F.O. Coil Unit .																							1	10	/6	
Insulated Bracket																								:	3/-	

# P. & L. WIRELESS SUPPLIES Pty. Ltd. 213 Elizabeth St., Melbourne. F4323.

(Open Friday Nights.)

### World Radio Tour with VK3MR

PART 2.

Vith the editor's blessings we continue on our trip around the world. Last month we were in the Dutch East Indies and we had just finished locating the VS gang. Dutch islands here are Java proper (PK1, 2, 3), Sumatra (PK4), and crossing the Java Sea we come to Borneo (PK5), and Celebes and Molucca Is .. who sign PK6 with Dutch New Guinea. Timor (CR10) is the only Portugal island here and is the first sight of land obtained by the flying boats on leaving Australia across the Timor sea. Going further north we find the familiar Philippine Is (KA), then to Taiwan I. (J9), and on to Japan (J). Then across the Sea of Japan to Formosa (J8). These represent the main possessions of Japan. Starting from Manchukuo (MX) we continue southwards to the Malay Pen, and we pass China (XU), Hong Kong (VS6), and nearby Macua (CR9), French Indo-China (FI8), Siam (HS) and around the Malay Pen. (VS 1, 2, 3) up to Burma (XZ), to the land of real QRN, India (VU).

A few miles north of Calcutta is French India (FN), and on the west coast is Goa (CR8), another Portuguese possession. To the north boundaries of India are Tibet (AC4) and Afghanistan (YA). Continuing, we come to Persia (EP) and Iraq (YI), the last being Hejaz (HZ), which is in Arabia. In the Persian Gulf we also locate VS8, Bahrian Is. Little can be gained by going over all the African countries as they are set out clearly in the list and are very easy to locate on any map. Briefly they are:—VQI to 6, ZOI, 4, 6.

VQ8 (Mauritius) is situated east of Madagascar in the Indian Ocean, and Chogos Is., also VQ8, can be found south of the equator below India. ZD 7 and 8 are St. Helena and Ascension Is. respectively which are off Africa in the South Atlantic Ocean. It is interesting to note that ZC2 and 3. Occos and Christmas Is.,

are in the Indian Ocean right near the Dutch East Indies and these must not be mistaken for Christmas Is. in the Pacific, which is also a British possession, and Cocos Is., west of and belonging to Costa Rica. Malta and Gibraltar in the Mediterranian Sea are well known as well as ZE. SII. and ST. ZU9, is Tristan Da Cunha, an island some 1500 miles to the west of Cape Town in the South Atlantic Ocean. France has seven possessions in Africa and two islands off the east coast. They are CN, FF8, FE8, FD8, FL8, FT4, FQ8, FA. The islands are Madagascar (FB8), with Reunion Is. to the east (FR8). Portugal also have several countries here in Port Guinea (CR5), Angola (CR6), and Mozambique (CR7), and three islands of the N.W. coast which are Cape Verde Is. (CR4), Azores (CT2), and Madeira (CT3), Ethiopia (ET), Liberia (EL), and Belgian Congo (OQ completes the list.

There should be no difficulty in finding the European countries which are listed so I will not linger there. It will be of interest to those with beams to know the exact direction some of the cities are from Melbourne. North America: New York. of deg. north of east: Los Angeles. 35 deg. north of east; Quebec, 39 deg. north of east; Vancouver, 52 deg. north of east. South America: London via the south east passage, 39 deg. south of east; Ecuador, 21 deg. south of east; Buenos Aires, 58 deg. south of east or 32 east of south; Wellington (N.Z.), 10 deg. south of east. South Africa: Cape Town, 32 deg. west of south; Cairo, 6 deg. north of west. Asia-Europe: London, 39 deg. north of west; Berlin, 36 deg. north of west; Calcutta, 30 deg. north of west; Ceylon, 14 deg. north of west; Hong Kong, 40 deg. west of north. Cape Verde Is. and Sierra Leone and that corner of Africa is even further south from Melbourne than Cape Town, and Brazil is almost due south.

#### SILENT KEY.

It is with deep regret we announce the death of Fred J. Kemble, VK6FJ, who died in the Norseman (W.A.) Hospital on 21st February after a relapse following an operation ten days earlier. Fred, who was only 24, was well known and liked among the amateur fraternity of VK6 and his death came as a shock to many. He left his home at Katanning in December last to take up a position on the Norseman Central mine and during that time his call was not heard. Many hams must have wondered why the one remaining Katanning enthusiast was not heard. His scholastic career was marked with brilliance and his interests apart from radio were cricket and football.

Sincere sympathy is extended to his parents, Mr. and Mrs. F. Kemble, of Katanning.

## VICTORIAN NORTHERN ZONE CONVENTION.

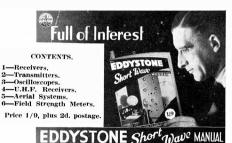
Zone members and metropolitan nams are reminded that the next Convention dinner and doings will be held in Bendigo on 29th-30th April.

#### VERWI TRANSMISSIONS.

The official broadcasts of the Victorian Division from VK3WI will be transmitted on 4,000 and 7,300 kc's. on Tuesdays in future at 7.30 p.m. These transmissions will be broadcasts only and the station will not be open for communications with listeners as the number of contacts of late has been too heavy for the operator to handle. Further arrangements are to be made to open the station on other nights for contacts on A1 and A3 waves. Details on this will be announced in the broadcasts.

# THE SHORTWAVE EXPERIMENTER'S HANDBOOK

By EDDYSTONE -



ALL EQUIPMENT THOROUGHLY DESCRIBED. -

Obtainable from All Eddystone Distributors or R. H. CUNNINGHAM & CO. A Robinson Road. Hawthorn. Vic.

#### Contest Section

(By R. F. Cohen, VK2TF, Federal Contest Manager.)

In presenting the last contest section for the year, a few general remarks might not be out of place.

The contests for the year, with two exceptions, have been well supported. These exceptions were the 80 metre VK-ZL phone contest and the National Field Day. For the phone contest only two logs were received from all VK and ZL, with the result that the contest was abandoned, a very sad state of affairs.

This apparent lack of support to some extent was caused by oversight, or, possibly, just laziness in not sending in logs. From the two logs we received we know that at least eighteen stations were participating, and yet we receive only two logs!

The National Field Day solicited only nine logs, which was rather surprising in view of its popularity last year. The fault here, I think, rests with the contest itself and not the participants.

After all, as a national field day, it is more like an international day, the national aspect being lost by allowing dx contacts to influence the score too much.

Next year I would like to see the rules revised so that (a) contacts must be within Australia; (b) a power limit of either 5 or 10 watts be enforced.

The nower supply is always the handicap in portable work, and with a limit such as this a genemotor would not be essential to give the competitor a fair chance of winning. This, I know, would encourage quite a large number into the field with small rigs, such as a 6L6 crystal oscillator with about 150 voits of B battery as the power supply.

To date, I have been out in two Field Days, and I think everybody in the party agreed that, although conditions were poor and contacts few and far between, they had an enjoyabletime, particularly when the antenna raising stage was reached.

One other suggestion to liven up contests. There can only be one winner obviously, but if you think that you have little chance of success do not ignore the contest, stage a contest within a contest among your friends. A little friendly rivalry like this will greatly boost the contest in general and if you do not happen to be the ultimate winner you may have the satisfaction of putting it over the local lads, anyway.

Now for some results.

The 1938 Field Day only attracted nine entries. 3UK, last year's winner, recorded a double by again winning from 2LR, who was second last year. Vaughan certainly deserved to win after all the trouble he went to His antenna system consisted of two beams rotatable through 90 degrees. The rig was a 6V6G tritet oscillator driving an 807 power being supplied from two vibrator units.

····				
VK3UK,	304	Į	 	1
VK2LR,				
VK4HR,				
VK3UM,				
VK4FB,				
VK4RY, VK6GM,	36		 	6
VK4KK				
VK2AGO	48	1 4 1	 	8

party, non competitor.

The All Band C.W. Trophy attracted quite a good entry. 5JT is to be congratulated on his fine score of 1280, and, by the way, Joe, you do not receive bonuses for each weekend, but only once during the contest. 7AB, with 1238, and 2VN, with 1000, are also to be commended.

Unfortunately for 5JT, he received no support from any other VK5's, so as far as the trophy is concerned his efforts were in vain. The State with the highest aggregate of the first three scores is Victoria, and so the trophy goes to VK3. Congratulations to 3ZC, 3MK and 3XS for bringing home the bacon.

Results:—5JT, 1280; 7AB, 1238; 2VN, 1000; 3ZC, 985; 4AW, 860; 3MK, 820; 3XS, 744; 4JF, 642; 3UM, 550; 7CM, 546; 2AFJ, 510; 2OE, 495; 4HR, 456; 4RY, 455; 4RC, 405; 3RJ, 405; 6CP, 365; 3HG, 234; 4UR, 238; 4KK, 224; 7DS, 136; 4JB, 131; 3EX, 108.

#### Federal and Victorian QSI Bureau

(R. E. Jones, VK3RJ, QSL Manager)

W3BGD, Albert Segen, operator of a private yacht advises that the yacht expects to be in Hawaii during March and may visit Australia later in the year.

Alan Brown, VK3CX, who recently sent away the necessary verifications for membership in the DX Century Club, has 134 countries on the board. Bruce Mann, VK3BM, advises that VP96 still awaits cards from VK7JB and VK7KV regarding QSO's nearly two years ago. VK7 is a separate country, so in case you have not his QRA, Buck, here it is, VP9G, J. W. Gady. Box 404. Hamilton. Bermuda.

DX from Quambatook, Vic. has worked 51 countries and 24 zoons on fone. On CW the total is 2 countries, 2 zones. Shame.

Stamp collectors requiring an exchange in France should write from F8BS, P. Bon'chon, Ing. Saint-Aigulin (Charente-Inferieure). France.

In passing Bruce, who does all his

An old call sign but possessed by a new owner is that of VK3KE, of Mentone. Joe, who will shortly be on the air, has a fist that will be an aset to the bands and along with 3ET, 3PI, 3CY, 3UE, 3XM and yours truly, pounds brass in the Telegraph Branch, Melbourne. At the moment, however, we have loaned Herman 3ET to the Telegraph Branch, Launceston.

Writing from aboard the Manunda, then anchored at Sydney, Andy Roudie, VK3UJ, states he is having a fine trip. Andy doesn't mention anything about his cab'n mate.

Desirous of an Australian correspondent is Adolf Friis, Sonderport 25, Aabenraa, Denmark. Adolf, who is 18 years old, must have mistaken the QSL Bureau for a matrimonial bureau as he writes, "Would you mind getting a boy (or a girl) of my own age for me." He is interested in sport, languages, music and all sorts of mechanics. So what have you? Might be a good spec. for stamp collectors.

See the list of cards on hand in these notes in February "Amateur Radio" and if you haven't sent that cayclope a ong, then do it now.



The Power Equipment with a Powerful Reputation THE Organisation respons-

#### Hilco Transformers Chokes etc.

has proved its high standards for an article of extreme merit as accepted by the largest consumers in Australia.

All Products Guaranteed for twelve months.

# Hilco Transformers Proprietary Limited

97-111 Berkeley St, Carlton N.3, Vic. Phones F 1661-2 CABLES & TELEGRAMS "HILCOY" MELBOURNE

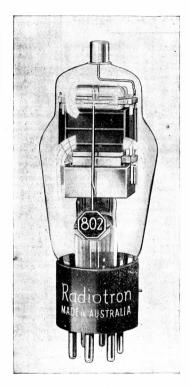
### Anateur Radio

### 28 and 56 M.C. Notes

(By A. Pritchard, VK3CP.)

The W all band cw contest has just finished, and before these notes are in print the phones will also have been going hot and strong, as the saying goes. There have been some more big scores running, and ten metres have been showing some new or seldom heard sigs, although, unfortunately for us, they have been only for the States. TI2FG VP6YB, XE1CM, LU9LU, LU9BV, LU5AN, LU1CA, CX1FB, J2JJ, J2KN and many others have excellent cw sigs judging by the reports given. is often r8 around 11 a.m. during Many VK's have the week-ends. made the most of the good conditions. and with such a number of W's on have been the look-out contacts continuous from 7 a.m. till 2 p.m., which shows how important it is for any enthusiastic contestant to put all possible time in on ten. VK2ALU, VK2EO, VK2UF VK2RA and VK2TI made many contacts, the latter having two faint sigs here. VK6SA was the only VK6 heard here and called by W's although others were probably on the job. From this State, VK3IW, 3XP, and 3CZ did very well. VK3CX was also heard, and Alan is joining the 10 mx happy family. VK3GG is new on ten metres, and has 30 watts into an 807 final and is contemplating putting up a vertical rotary-the receiver is an RME69. W6PDB has been testing a 230 deg. Zepp type of beam with VK3BQ, who gives the following details. The beam has two 20ft. long wires in phase and in line and having a 7ft, stubb in the centre. The director reflector is the same length, and spaced an 1/8th wave length. stubb has a variable shorting bar for giving the different tuning for directing or reflecting, and needs only a 6in. variation to give an 80 to 1 gain in the desired direction against the radiation from the right angle position, i.e. off the ends, as measured with a field strength indicator. Many thanks, VK2ALU, for the letter. Yes, by all means, keep a lookout. I appreciate any dope hunting, believe me. 2ALU is in demand with such a sig from a Vee beam, having 8 waves on each leg at 10 mx

VK3CZ has completely cured his big problem-that feed back problem-for trying all the lads' suggestions on how to do it and what to bypass, etc., had no effect. The trouble only disappeared when a small steel box was put over the first 3 valves. i.e., 57, 2A6 56 (which were shiel-ded), also a large steel cover completely over the whole modulator. now making it possible to turn the gain full on. Lately we have been hearing the W's calling HI7G. VP1DA, LU1DA, KA1ER and KA1AP on phone, the latter two having good strength here. Let us hope they turn those 3 element beams our way after the tumult and the shouting die. No reports are at hand regarding the last 5 mx field day, and hopes of contacts with VK7KQ on top of Mount Wellington. The weather was against VK3, and the day was not the best for for portable gear in exposed places on the local mounts, etc. Our good friend, VK5KL tells me that the lads there are either rebuilding for 5 mx or have immigrated to other bands, as activity is at a very low ebb. 5ZU has the 70ft. lattice mast nearly finished and ready to take the 5 mx beam array, and is also rebuilding, although still keeping schedules on Sunday afternoons with VK2NO. 5KL has been testing a tritet with a 6L6 tube and 80 xtal, and can get output down to 3 metres. The most outstanding and consistently r9 sigs for several months have come from W6POZ. The outfit has a 6L6 80 xtal, 807 doub, RK 28 doub, HK 56 buff and a pair of 100 TH in the final with 650 W. The mod. has a WE387 double button mike into a 56, 56, PP 2A3's and 100 TH in Class B. The freq. of 28530 KC gives the fol-(Continued on Page 14.)



Oscillator

\*

Frequency Doubler

\*

Buffer or Modulated Amplifier

Radiotron 802 is a completely screened pentode suitable for suppressor grid modulation and having a maximum plate dissipation of 10 WATTS.

RADIOTRON 802 is now Australian made.

PRICE **22**/**6** net

The World's Standard Radio Valves

# RADIOTRONS

## VK3MR's DX Notes

Both the CW and the Fone ARRL tests are over and we await with interest the final scores. Scribe is still wondering if any VK has worked over 650 CW stations during this How? In the BERU senior test it seems that SU6EC may be leading with G5WP second. I would appreciate a few more VK scores in both the BERU and the ARRL test. I hear several loud moans from the CW men about the persistent use of fone at the high frequency end of 14 mc during the BERU tests. Yes, you would think they would let up for a while, although its likely they didn't know there was a test in progress as they usually have no BFO in their supers! Sit down Bruce!

VK2DG is having a rest from tests (No!), but has managed to collect 102 cards from DX countries and is claiming the right to join the select hand of century club hounds. Some choice ones worked by 2DG in spite cf his restricted activities are KF6DHW, Canton I., 14375 kc; KG6NVJ, Jarv s Is., 14360 kc around midnight; VP2AB, 14405 kc, 2230; CX2BG, 14400 kc, 2100; OA6FE, 14335 kc, 2100; LU4AG, 14295 kc, 1900; ZP7AA, 14460 kc (well out), 2030; PY1AJ, 14310, and PY1AL, 14370 kc, both 2100. What a list for S.A.! You make my mouth water. Don't know what the VK6's will say about it. The reason the VK6's can't work South America is because the south pole completely hides it and sigs just don't like going over it.

3HG is very modest about his DX work as to be expected. Using low power fone he turns up with things like FASQC, FT4AN, 14400 kc, VP4ZA. This chap is the VP3ZA chap worked in the BERU test and is now on a ship and he will QSL and asks for cards to be sent via G8DF. Neil has 93 countries worked and 55 on fone and has 74 confirmed. Still getting good results with his Vee beam and is expecting big things when he gets the new vee over the

hill. Conditions seem to be improving all round now.

FONE.-Little activity reported from this quarter. It seems that the recent rains are keeping the country DX hounds quiet as they are busy with harrows, etc. This seems to be 3BM's trouble, and not the BFO reported last month. Bruce reports conditions for Europe the long way in the afternoons is improving and he has contacted SP2HH, 14075 kc; OZ5BW, 14040 kc; HB9CC, 14020 kc. Just a few from the rarer parts are as follow:--VP6LN, 14055 kc; CE3AT, 14015 kc; OA6AI, 14048 kc; LU6OA, 1400 kc; HK3CL, 14037 kc; GM3TR, 14140 kc from Orkney Is. 3BM has received some good reports from W on his 7 mc fone which are very gratifying to him.

#### (Continued from Page 12.)

lowing measurements on the 1/10 wave spaced 3 element beam—3t. 6in. spacing, 16tt. 1in. dir., 16tf. 9in. dipole 17tt. 3in. refl., made with 1in. diam steel tubing. The outfit is on a 200tt. high hill, 10 blacks from the Pacific Ocean at Hermosa Beach, i.e., 20 miles S.E. from Los Angeles, now power lines, only lots of water between us gives this terrific signal. VK3XP is making a very nice rotary 3 element beam with steel conduit, and hopes to have it in position on his lattice tower very shortly. 73.

We have been asked to repeat the results of the 1937 VK-ZL DX Contest, Receiving Section, so here they are: —VK3ERS, 112800; BERS195, 30,510; ZL166, 44,032; BRS1535, 7280; OE151, 2528; HB9RNV, 5490; BRS311, 6820; HB9RKY 1592; DE3727/P, 8380.



# Are YOU a Member?

Subscriptions to the W.I.A. (Victorian Division) are as under:—

Full Member, 20/-. Associate Member, 16/Country—Full Member, 14/6; Associate Member, 8/9
Student Member, 7/6. Entrance Fee, 2/6

Write to Secretary, Law Court Chambers, 191 Queen St., City

### Genuine BLILEY Crystals





All units engraved with frequency Calibration accuracy—2 parts in a million.

LD2. 40 metre in calibrated holder, low drift, high output ...... 29/6 B5. 40 metre (finest amateur Xtal ever produced) high

B5. 40 metre (finest amateur Xtal ever produced) high output ...... 39/6

HF2. 20 metre and 10 metre VF1. 80 metre variable (rubber Xtal) calibrated variation

of 5 k.c. on fundamental 67/6
BLILEY Holder for 1-inch Xtals moulded dust and damp-proof, 7/6

nett.

LD2. Xtal 2/6 extra for nearest to your choice of frequency.

We always supply types that double outside of U.S.A. fone band.

Add 5 per cent. sales tay to prices

ATKINS (W.A.) Ltd. 894 HAY STREET, PERTH WESTERN AUSTRALIA Stockiets National (U S.A.) Receivers and similar Ham Gear. Write for Illustrated Ham

1st APRIL, 1939.

### Divisional Notes

To ensure insertion all copy must be in the hands of the Editor not later than the 18th of the mosthpreceding publication.

#### N.S.W. Division

### COALFIELDS NOTES

(By 2KZ.)

VK2YO.—Busy building a new rig for 14 mc, also fixing shack, making it more comfortable, but doing very little on the air.

VK2KE.—See you now and again, om, but doing nothing in the radio line; same applies to 2XT.

VK2DG.—Generally on the key and time you listen, doing considerable service work. Have you that new line up yet, om? Has an idea for a midget ring 6P6, 807, 808 built yery compactly.

VK2YL.—Very unlucky to burn his rig up due to faulty insulation. Will not be active for some time to come, also going to Queensland on trip.

VK2CW.—Busy with YL, so radio

just passes by.

VK2PZ.—On 20 metres on phone, using 809 final with 6L6G modulator, home made modulation tranny, quality good according to reports.

VK2KZ.—Using 14 mc, doing some good DX on the key.

Please send me your dope boys so as I can keep these notes interesting.

MAX.

#### ZONE 5 NOTES. (VK22IG.)

Conditions an 20 are rather good here, though the rare DX pretty hard to find through the W-VE barrage. We thought QRM was bad at various times, but during this W-VE contest it made a new standard for QRM. When the W stations were resting the Europeans came through with rare punch, but beyond a few strays they consisted of the more usual ones such as G, GM, GW, SP, SM, El, etc. If we have time we will mention a couple of strays in the DX notes.

2AFD is so busy running the AIR Force that he threatens not to renew his licence.

2AEO is worried as to what is DX. Reckons may be VP4 is. We dunno. Uses his ten as a beam tube. It has a window in the plate so as you can see the filament is doing its share of going red!!!

20J is back from his ZL cruise. We have heard him tuning the rig up so expect he will open his fone session with a Maori war crv.

2VK must have sunk in his little ship or just buried at sea. We aint heard of him

2QE and QD birds of a feather, but quieter than the average cocka-

2AP a bit the same, but he has an excuse as is building a dovecote.

2IG trying to find DX among the W's. Oh yeah!!! Also put up a beam on South America and promptly worked Guam. Must have been an earthquake some place!!

2EÜ waiting on one of the mag advertisers to fulfill their promises. Ordered gear on ten days' delivery, but it's like the average QSL. They are not the only firm to miss either. What's wrong with these firms that they don't like to tell the truth?

#### BORDER DX NOTES. (VK2IG.)

For those who haven't worked Portugal there are a couple of CT1 stations on consistently in CT1PC CT1ZL. Frequencies and 14365 and 14360. HC1C with a rough note on 14390 is an easy contact but a hurry up gso! LY1KK on every night around 14340, but has been heard on others. GM8MN is easy on 14365 nearly every night and qso'd a lot here. KB6GXB is a new Guamite on 14310 and KD6DG near him most evenings. PK4KS is on Singep Island off Sumatra, but don't think you can count him outside Sumatra. YL2BZ heard but not worked on 14365. FK4 also heard on 14340. VP4ZA on most nights, but busy with W's. The same applies to VP5-PZ.

#### Victorian Division KEY SECTION NOTES.

Owing to misplaced confidence in the abilities of a certain piece of horse-fiesh, your correspondent's outlook at the moment is a trifle jaundiced. The statement is offered so that any note of gloom or despondency that may be detected by my two readers will have their sympathy and understanding. Thank you.

Reminiscent of the above mentioned quadruped were the motions counter-motions and amendments that failed to make the grade at the March prayer meeting. This wholesale falling by the wayside was a result of various attempts to get an expression of opinion from the meeting on the vexed Fone versus CW controversy. The outcome was that council will have to consider a recommendation from the Section to the effect that telephony be restricted on 7 mc and 14 mc to the frequencies of 7200 ke to 7300 ke and 14000 ke to 14250 kc. Enough comments have been made, opinions aired, and suggestions offered to make further remarks at this stage superfluous, and undoubtedly the ultimate result will be of keenest interest to all concerned. Strangely, or perhaps naturally enough, depending on the viewpoint, there are a few of the boys who do not view enthusiastically the time spent on this subject at recent meetings, and FR amongst others, voices a plaintive "Whaffor?"

Initial tests of RX's new ten tube receiver, which incorporates an 1851, EK2, two stages of 1500 kc IF's, noise suppressor, hot and cold folding doors, grey lacquer and crystal filter, resulted in a noise like the muezzin calling the faithful to prayer. Subsequent adjustments produced the noise of about ten thousand of the faithful telling the meuzin what he could do with his trumpet, and Cedric has since been seen around a local emporium inquiring as to the price of ear muffs. At the time of going to press the receiver was not working, but if amateur

radio lasts over 1942, RX will be on the air with it. Here's hoping.

.II wants to know why conditions suddenly go bad during contests. Mr. Heavyside may know the answer to that one: cursory listening gave the impression that the CW half of the ARRL Test was not so well patronised as in former years. Your correspondent worked one W station and has since been combing his fingers through his long white beard and pondering on the departed glory of the days when three or four hundred W's during the period were easy money. Those were the nights, when on going out for a breath of fresh air, one tried vainly to copy what the crickets on the back lawn were trying to send, and had thoughts of reporting them to the RI for using T1 notes. The contest and rebuilding of an exciter unit kept UM busy, while QV and IW shared the same frequency, much to the delight of the former, who let IW do the calling and contented himself with answering. An old trick, my masters, and a great time and energy saver.

Looking over a few members of the Council, we find UK busy arranging details for the forthcoming Convention, and keeping the R.A.A.F. Reserve members up to the mark. MR's new transmitter is still unfinished owing to trouble with the power supply, and to the fact that Snow was confined to his couch with an ague, which defied the purging draughts of leeches and apothocaries for well nigh a fortnight. ML is engaged and becomes the recipient of your correspondent's blessing together with the month's bunch of orchids. Omnia vincit amor, which interpreted means that DX may not be so good in the future. WG is still inactive, although the new super is taking shape, and another year or so may see completion.

CB reports himself as being quiet, although I've never yet heard that guy quiet. EN is testing portable equipment on 7 mc, and IK, fed up with QRM on his crystal frequency, is trying electron coupling. ED and XJ had a picnic trying to erect a three element 14 mc beam in a space too small to accommodate it, and decided to redesign it for 28 mc. This band will shortly have the attention of WD, who has been build-

#### Amateus Radia

ing a super transmitter with an 807 and two 809's. DF and TU have a band switching exciter using a 6L6 tritet, 6N7 and 807 to drive pushpull 35T's on 28 mc, but apparently not quite the goods yet.

HK took time off from work on his 28 mc rotary beam, and in company with YK spent a holiday at the Lakes. Having a boat at their disposal, and YK being an ardent yachtsman, HK was initiated into the mysteries of rigging, and his next ethereal adornment should be something out of the box. JO is evidently not satisfied with what connects him to the ground, as in the March issue of "Amateur Radio" he was appealing for a copy of the legs of the participants in a recent field day, doubtless with a view to redesigning his supports on more aesthetic lines.

Had it not been for ML getting this bunch of orchids, they would certainly have gone to RX, who tells me that these notes are lousy. On reading them over, I'm inclined to agree with him. But I can took itU.H.F. SECTION. (By 3DH.)

Next meeting of the U.H.F. Section at the Institute rooms, 191 Queen street, Melbourne, on Tuesday, 18th

April, at 8 p.m. For the month of March the members of this section have been treated to what one might almost call an extended disappointment. The 5mx Field Day, which was carefully recorded in last month's notes, was a out." both literally "wash and theoretically. All was set for Sunday, 26th February, but fortunately for Victoria and the country-side therein -but unfortunately for the members intending to go out for the day with 5 mx portable-the weather broke and steady rainfall, commencing on the Friday and unbroken throughout Saturday and Sunday. forced the majority of members to remain at the usual locations. There were, however, two exceptions out of the gang who definitely arranged to be active, namely Gil Miles, VK7KQ, and Val Barnes, VK3OT. Gil tried



## **Experimenters Operators** Listeners!

BUY A Hallicrafters (America)

SKYRIDER COMMUNICATION

RECEIVER

SKY BUDDY, 5 tubes, tunes from 16 to 550 metres; built-in speaker. (All models SKY HUDDY, 5 tubes, tunes from 16 to 500 metres; Dull-in speaker. (All models have universal Transformer, 110/256 volts AC, 500 metres, Dull-in speaker.

CHALLENGER 11, 3 tubes, 7 to 550 metres, crystal filter, separate 12in.

SUPER SKYRIDER SX 16, 11 tubes, 5 to 550 metres, crystal filter, separate 12in.

dynamic speaker.

SPECIAL SUPER SKYRIDER, SX17, 13 tubes, 5 to 550 metres, 2 stages pre-selection.

crystal filter

INTERA SKYRIDER, SAIR 13. SAIR 13. SAIR 13. SAIR 13. SAIR 14. SAIR

Box 1015] G.P.J. Adelaide

Kilgariff's Agencies

South Australia, F2490

with absolutely no success to contact VK3 (via 40 mx) on the Saturday evening, 25th, and again on Sunday morning, the object being to find out whether or not the rain in VK3 was going to "dampen" the enthusiasm of our portable gang. This unusual condition on 40, left 7KQ completely in the dark, so as he said later, he had promised to go to Mt. Wellington, so off they set. They had with them a 40 mx receiver, but still could not hear much and transmitted and listened on 5 mx without any result.

VK3OT, who was scheduled to be atop Mt. Tarrangower, met with similar results to a certain extent. He set out on the Saturday in order to be all ready for an early operating start on Sunday morning; also with the object of perhaps doing listening during Saturday eome However, Val did not even night. reach his usual location at the top ofthe mount, due to a very wet and unsafe track and had to camp on the mountain side. Apart from catching a cold he achieved little else. These two cases of unfortunate luck only go to show what the "Ham Spirit

Other stations which were scheduled to operate from the home in any case. VK3YL. locations VK3JO, VK3DA, and VK3DH-with the exception of VK3DA-were on the job; also VK3QR, who was to go to Mt. Macedon, was contacted at his home location.

And so, as far as "yours truly" was concerned, the day was made up of QSO's with 3JO, 3YL and 3QR, all from their home locations.

3JO operated his usual E.C.O., 6V6, 6L6, 6L6 transmitter on about 58 mc with about 20 watts input.

3YL operated her usual C.C. transmitter on one or two crystal frequencies around the low frequency end-in conjunction with a beam antenna directed at VK7.

3QR was using a self excited modulated oscillator with very stable results and putting out a good signal.

3DH operated on crystal control on 56.064 mc., 42 tri-tet C.O., 6L6G, doubler, T20 buffer on 10 mx and T20 doubler to 5 mx (50 watts input), the latter stage being modulated by a pair of 6L6G's.

A certain amount of humour has somehow crept into the printing of our notes for March. If readers who have not already laughed over the error, will turn to page twenty and read again the second paragraph on the top left-we leave the rest to you-our worthy chairman, 3JO. suggested that we may be able to publish some drawings of the "legs" in question, but we seem to lack the necessary artistic ability

To return to matters of technical importance. I learn of antenna exneriments at 3YL and 3JO via radio from these people. It seems that Austine's beam receives 3.10 very well when her beam is horizontal and JO's antenna vertical. Results are not so good when both use horizontal heams. There is a lot more to this story-telling of strange wrong directional effects, etc., and strange results with combinations of vertical and horizontal polarisation, but as I heard, as late as 16th March, via mx from 3JO that he has discovered a miscalculation in his beam assembly, we shall defer any full description. Maybe we could have an accurate write-up on the work direct from Herb and Austine

Durng the month we received a letter from VK3BW at Portarlington. Arch is well on the way to doing good work with a couple of HY 25's in push pull on 5 mx. He also has a very good 5 mx converter going. ahead of the regular ham super.

If any other country members who contemplate doings or have already in hand an idea in the way of an interstate 5 mx relay, would let us know, it would be very greatly appreciated here.

Send rough notes to the secretary and we shall do all we can to make an interstate relay possible.

#### WESTERN ZONE. (VK3HG.)

3II.-On 7 mc. with very nice signal. Having trouble with his house lighting batteries, but hopes to have the power on soon.

3TW. - Contacts the aforementioned station regularly. Also building portable equipment ready emergency work.

3FA.—Active occasionally QRP. Has worked four zones, and says the other 36 will not take long!

3SZ .- Not heard so much lately.

### Amateus Radio

3DX.—Still entertaining the BCL's as of yore with excellent transmissions.

3XG.—Very regular on Sunday morning hook-up, and getting the DX on 14 mc.

3TM.—Heard on 7 mc. phone. Hope to have him in on the hook-up

3BU.—Has antenna up on new mast and putting out fine phone on 7 mc. Very interested in 56 mc. work.

3WT.—Also interested in 56 mc. and active on 7 mc.

3BW.—Seems to be only on 56 mc

30W -Holidaving at Lorne.

3JA.—Lost his antennas in gale recently. Hasn't been heard for sometime.

3HG. — Working the Europeans quite regularly as well as other DX. Hoping to get the new antennas in action some time before Xmas!

Contacts for the "Worked all VE" operator's certificate, details of which appeared in the March issue, must be made on or after 1st January. 1939.

## EASTERN ZONE NOTES. (VK3DG-PR.)

It is hoped to hold the Eastern Zone Convention this year at Sale. The date has not been definitely fixed, but will probably be 10th-11th June. However, we will be able to let you know for sure next month.

The zone hook-up on Thursday nights has not attracted many so far and we would like to see more on the job. Remember chaps, Thursday nights at 8 p.m. on 80 mx. As many as possible are asked to get on the job. Now for some doings.

VK3DI.—Jim on 40 mx occasionally, but YL qrm is reported to

VK3EA.—When are we going to hear that portable rig. Evan?

VK3HZ.—Is 3UL keeping you too busy. Murray?

VK3XZ.—Another from 3UL. Reported to be on 20 mx.

VK3QB.—Haven't heard you for ages, Jack. What about getting on the job again?

Vax3PR.—Rebuilt xmtr. It looks nice, but there are still a few bugs to get out of the speech amp

VK3WE.—Bill busy building portable gear. More for emergency use than anything else. Making a fb job

than anything else. Making a fb job of it too.

VK3XH.—Stan has rebuilt modulator now using 809's PP. Active

occasionally on 80 mx.

VK3SS.—Keith not heard on much, busy with service work since

much, busy with service work since fb rains in his district. VK3LY, 3NO, 3GO.—All three busily engaged rebuilding at 3TR

and getting along nicely, so should soon have some spare time for the ham game. VK3IL.—Bob has not been heard

of for quite a time, what are you doing, om?

VK3DG. — Has now re-erected poles and antennas blown down in recent gale and working a little dx on 20 mx. Trying out several different antennas.

VK3VG.—Heard on 40 mx with fone fb too, we are looking out for you, om, on 80 mx now for zone hook-up.



#### CRYSTALS ARE CHEAPER!

The New Diamond Saw enables me to offer:

 80mx., Low Drift
 15/ 

 40 mx., Thick Cut
 20/ 

 20 mx., Thick Cut
 40/ 

 Prices for Special Types on Application

 Immediate Delivery.

# Maxwell Howden

13 BALWYN RD., CANTERBURY, E.7 Vic.

#### NORTHERN ZONE NOTES. (3HX, 3ZK.)

Firstly we must apologise for the absence of the notes last month. The usual scribe was on holidays, so we trust you will forgive us this time.

We would like to remind members of other zones of the Northern Zone convention to be held in Bendigo on 29th April. Arrangements are well in hand and an enjoyable and interesting time is guaranteed. So be there

3TL.—Treb. is still getting some elusive DX. Also doing good work towards the success of the Northern

Zone convention.

3OR.—Heard occasionally on 80 and 20.
3EP.—Now operating from Ben-

digo. Doing his share to make the

convention a success.

3QC.—Who lives next door, putting out a nice sig. on 80. Has a
mountain goat crystal, but has it
tamed now.

3BG.—Just around the corner adding to the QRM. Still contacting

3EC.—Has three separate PA's on 80, 40, 20. The latter not performing to expectations. Won't be long

3BM .- Interested in 5 mx. Should

be active on that band now. 3CE.—Hasn't been heard of for months. Where are you, Roy?

months. Where are you, Roy?
3WN.—Just back from fire demo.
at Ballarat. Met some of the gang

of Ballarat. Met some of the gang down there.

3AI.—Staged a comeback, but be-

lieve the is is in pieces again.

3NN.—installing new power supplies and a nice sig despite QRP.

2AHY.—On again after a break. Also QRP, but a fair signal.

3IH.—Has been in hospital. O.K. again now. May be off the air for a period.

3HX.—On the job in between trips. Quite a busy young man. 3ZK.—Contemplating a rebuild.

We would like to hear from various members as to their activities, etc. What about it gang? Write to Box 123. Swan Hill.

#### Queensland Division

At the March meeting nominations were called for the various executive positions for election at the Annual General Meeting. In all cases, with the exception of councillors, nomination were selected unopposed, so at the annual meeting the following elections will take place:—President, A. E. Walz, VK4AW; secretary, Geo. Hughes VK4HU; treasurer, W. Chitham, VK4UU.

Conditions generally have improved out of sight just prior to the ARRL cw contest, particularly on 20 and 10 metres. 40 metres saw quite a number of W contacts taking place. Incidentally, there are a few from stations to be heard working ZL stations on 75 metres around 11 p.m. E.S.T.

4UR, 4RC, 4AW, 4PX were on during the cw section of the ARRL. 4AW reported working W every 4 minutes during the first week-end on

10 metres.

4RY.—Has a new 5 tube super and just getting used to the controls. Has now landed 97 countries.

4EL.—Now up to about 106 countries. What about letting us start a Century Club? What say, gang?

4JP.—Is going flat out in the fone section A.R.R.L. Now worked BERTA, and awaits cards. Total countries on fone to date 66. This boy gets out.

4KH.—Just returned from hurried trip south, and working again on 20 fone.

4AP.—Changed his place of business, hence not heard for a while.

4WF.—Bill Faber, engineer at BC station.

4AY, Ayr.—Sends hs 73 to the VIB gang, and hopes QSO some of the old boys.

4AG.—Arnold Greenham, of Innisfail, paid visit to VIB and had long yarn to 4RP of the same town from 4AW shack.

4ML, from Richmond. — Flew down to Sydney and back on business. How we envy you, om.

4FJ.—Appointed Zone Manager to take office from April. Country men, please note. 4FJ is on cw and fone on 40L band, and will be happy to keep any skeds you desire.

4CU, of Clifton.—Had the pleasure of visit from 4RY recently, and long yarn on conditions generally. Think Charlie can claim to be the oldest active ham in VK4; dates from about 1924-25.

#### amateur Radia

4UV.—Just purchased a new motor cycle, all "streamlined plus." Working the Casino gang, using tritet oscillator and a wire tossed out the window.

4FB.—Any rumours to the effect that Fred is dismantlnig the gear prior to an exit are false; the transmitter is being completely rebuilt.

4WT.—Worked a new one in an LY from the new location at Red

4RT.—On 20 and 10 with 807 in final. John struck a spot of bother; found himself on 10 instead of 20. A case of getting his coils mixed. or

was it his drinks?

4HU.—Looks like another prospect for the portable section with his new 8 h.p. Vaux. George just joined the Army Sigs. Section.

4HB.—Just been appointed Secretary, Brisbane Glider Club.

#### South Australian Division

(By VK5KL.)

The delegate to the convention held in Melbourne to represent VK5 is Mr. G. Ragless, VK5GR. It will be remembered Mr. Ragless represented South Australia at the convention held in Tasmania four years ago.

On Sunday, 19th March, a test out of the emergency network was held and proved useful in giving participants good practice in such proce-dure needed in times of emergency. Four stations in outlying districts worked with a control station which in turn worked with a central stttion on another band. Messages were given and information passed on with proper procedure. Co-operation from a plane to ground with five metre gear kept those at the central station informed as to what was going on that could be seen from the air. In all, everyone had a great The annual general meeting will be held on 19th April, so all are asked to attend this night. One cannot write without mentioning the disaster that occurred to Bill Heinrich, VK5HR, whose shack caught fire from backfire from his petrol driven engine, and in saving his gear Bill was severely burned. Please accept our sympathy Bill and sincere wishes for a speedy recovery.

# Bright Star Radio VK3UH

SAME DAY MAIL ORDER SERVICE TO ALL STATES.

CRYSTALS ground from selected Brazilian Quartz and tested to 50 watts input to penthode oscillator as used by leading experimenters and DX stations throughout Australia. Accuracy plus or minus 3 Kcs.

 80 metre X cut
 10/ 

 80 metre V cut, Zero drift
 10/ 

 40 metre X cut
 25/ 

 40 metre V cut, Zero drift
 25/ 

 20 metre, Special
 £2

Plug-in Dust Proof Holders, 7/6 each.

Crystals are full size, 1in. square, or smaller as desired. Taylor Transmitting Tubes at special prices.

 T55 Triode
 £8/5/ 

 T40 Triode
 37/6

 T20 Triode
 24/ 

 T21 Tetrode
 23/ 

 A66 Rectifier
 17/6

Satisfaction Guaranteed.

# 517 LOWER MALVERN RD, GLEN IRIS, S.E. 6, VIC. Phone: U1218.

# **VEALLS**

# . . the Name to Know in Radio

## A. O. P. C.

Do you hold the A.O.P.C? If so, drop a line to Vealis, have your name recorded on their special list . . . it will be to your advantage. Write for details. Give call sign or other verification.

# BIG CATALOGUE POST FREE!!

Vealls Big Radio Catalogue is post free to amateur transmit ters. Write for your copy to-day. Hundreds of items and illustrations—the pick of the thousands of items to be found in Vealls Six Big Stores.

# VEALLS 6 BIG STORES

Address all letters to BOX 2185T, G.P.O., MELBOURNE

490 Elizabeth Street, Melbourne. — — — F3145.
243 Swanston Street, Melbourne — — — — — C3059
168 Swanston Street, Melbourne — — — — — C10524
299 Chapel Street, Prahran — — — — Wind. 1605
3-5 Riversdale Road, Camberwell — — — — W1188
07-00 Duckle Street Moonee Donds WII7000

Conditions on the 7 me and 14 me hands are rather good, but QRN has been particularly heavy of late. The W test has brought to light the usual swag of American contacts to be obtained during this test. VK52U reports 10 mx very quiet, and 5 is the same, no one being active on this hand. Great interest has been taken in the R.A.A.F.W. Reserve reorganisation in this State and by the number of forms sent out should have a good waiting list as the quoted number for VK5 is only eighteen members.

As Easter is at the beginning of April this year we can take the opportunity of wishing all a good Easter.

BARKER ZONE.

(By VK5GW.)
Conditions here are absolutely bad. I have been on the air every day this month listening to the BERU and W tests. We can hear plenty but are unable to get out. I managed to rake in a G, ON, YU, PK, ZX on 20 mx, but never worked a thing on 40. Have tried almost every antenna that it is possible to rig up, including beams, but with very little effect. The above stations were worked on the old end-fed zepu.

During the whole month I have not heard a VK5 on either 40 or 20 mx so you can see what this Q.R.A. is like. Nor have I heard from any

of the hams in this zone.

5XR is putting over good fone on 40 and 20, but is not having much luck due to conditions around here. He has got over to KA a couple of times, also to W.

times, also to w.

A queer thing about conditions is that one has only to go about seven miles out into the country and conditions absolutely change. Stations from Europe, South America and South Africa come in at R7-8.

WAKEFIELD ZONE.

(By VK5RE.)

VK5LR.—Had the pleasure of a real he-man Q.S.O. with Jack recently and very fine fone indeed.

VK5LC.—Les spent a few days in Renmark recently. Tried to talk him into swapping his farm for my fruit

block, but nothing doing! VK5GS.—Pete still putting out

some fine cw.

Ron and Nancy Green recently had a shifting day—and they are now installed in their new qra. By the way, Ron recently built a refrigera-

tor that works! OK for the beer.

Merv. Tucker still studying hard

and still has a nice motor boat—when do we go boating Merv.?

5RE has been too busy attacking the fruit problem to do much operating. So am afraid cannot give details as to local operating conditions, so I would be very pleased indeed to hear from any of the gang.

VK3PX and YF called in from Mildura a few weeks ago and had a look around. Always glad to meet the VK3 gang, especially Harry.

GREY ZONE. (By VK5LC.)

Here we are again boys, another month gone by and still no notes from some. However, had a visit for a week-end from SRJ and 5HR complete with XYL and YL and we paid a visit to 5YM, SNW, 5BK and 5MP, and have notes to-day from 5LG, so do not expect notes from those visited this month, but will be looking for them next month on the Friday before the 10th from you all.

5HR.—Poor old Bill after having a good time over the week-end had to go home and have the petrol tank of his lighting plant blow up and land him in hospital. We are all sorry to hear this, but buck up Bill,

o.m.

5RJ.—Wait till you hear the new rig on the air Darce, how are coaxial lines and SO2?

5NW.—Bob still very busy all the week with talkies, but is home weekends and should be on, but Bob has

a mo-bike and maybe YL, eh!
5BK.—Jack still at 5CK, but
comes on now and then with a note
like nobody's business. Jack had a
snake for a companion for some time,
but didn't think the snake liked him,

so rang up 5MP for a gun.
5KJ.—George using one watt,

pending new rig.

5LG.—Leith tells me that has TRF perking again, also all emergency equipment ready which works well on 90 volts B batts., good boy. Special note for me to blow up council re no news of doings and no news of BERU and W VE tests.

5YM.—Norm has been QRL for 2nd Class Ticket. Went down for exam last Tuesday, we all wish him luck.

Those who have not been heard and no notes are 5WG, 5WJ, 5TL, 5HS, and you other chaps that may be members. 5LC.—After 5RJ and 5HR went home and as we couldn't hear a thing on 20 mx while they were here, I thought would go down and see if I could get some DX. Worked KA1PI on fone 3½ watts, Q5, R7, and CT1ZZ and CM6AM on CW. I am now sure the Yee Beams work!

#### Western Australian Division

(VKSWZ)

(General Meeting held every second Tuesday in the month at 8 p.m. in Division Headquarters, Rooms 2 and 3, Melba Chambers, corner Hay and Milligan streets, Parth.)

Conditions have been rather patchy over here, but 14 mc took a turn for the better during the month and several stations renewed contacts with W. Several optimistic remarks were heard to the effect that the conditions seemed to be on the improve. Hope this is so, but "flash-in-the-pan" is an expression often applicable to radio. 7 mc already shows some promise of winter DX, but has some very noisy spells.

In the Winchell Way-

6MW missed February meeting strained larynx said to be cause this fone DX.

6BW all set to burn holes in 56 mc with fifty-watt c.c. rig—will have run off 19th March sked before this reaches print—here's hoping for interstate.

6WG once of Wiluna now active again at Albany.

6AZ heard clicking (!) the DX from Youanmi—heard working 5WM (ex-6WM) on 20/2/39

6BB and 6CP went snooping at new airadio station one week-end to see remote control-large man in White appeared and asked "whaffor?"—when he (ex-9AW of Rabaul) eard they were hams all ended happily with kind inquiries about W.I.A. and strong possibility of Institute party being shown over—whoopse!

6JC not yet active from Charlie's Creek—finding kitchen stove poor substitute for power point where soldering is concerned.

6MM (another "chalkie") said to be somewhere in Manjimup district —sad loss to 6HT—you'll have to operate the station yourself now,

6ZO blows the dust off now and then—has 6V6G, 6A6, 807, 809 with 6L6G's for modulators.

6FO made a comeback the other Sunday—awful shock for 6CP, who was first QSO—rumours about YL student as protege

6GB threatening to make me eat my words—says he would like 6L6G's in place of 46's—also darkly threatens to go 56 megacycling.

6JS heard calling "CQ twenty" on forty on 10/3/39. 3VG called him (on forty) but Jack must have been listening on twenty—beats the band(s).

6GA has invented two half-waves in phase guaranteed to radiate equally well in all directions—pat. pending!

6AF joined ranks of "chalkies"—teach 'em the code Allan.

ach 'em the code Allan.
6YL not heard these days.
6WZ developing folded antenna—

neighbours now convinced crazy. Technical note.—Do not use sandfilled bottles as weights for vertical sections—very painful.

#### Tasmanian Division

(By 7YL.)

The attendance at the monthly meeting held on the 14th was rather poor. Several members sent apologies, being unable to attend owing to "shift" work.

It has been decided to hold a 5 mx field day at the aerodrome at Cambridge. With the co-operation of Mr. Shorthouse, who is an experienced aviator, a 5 mx transcelver will be installed in one of the planes, and communications are to be established with other transceivers at various places within a 30 mile radius of Cambridge.

It was also decided to apply for a 200 mx permit for 7WI, and have a regular Sunday session. If the application should be successful, licensed operators will take turns to conduct the programmes.

It is urged that all amateurs should make an earnest endeavour to be "active" hams. Upon totalling the numbers, it was found that about 20 per cent. of amateurs in VK7 were active; the remainder were heard about once every six months, or else

not at all. In some cases, it would take a lot of cleaning to rouse the spiders and their accompanying cobwebs from the gear. Three years ago, every Sunday morning and evening, a regular "mother's meeting" was held between members of this division on the 40 mx band. Now listening on 40, the absence of VK7's is most conspicuous. Still, we will hope for the best, and trust to hear lots of VK7's in the pear future.

Scandal.

7CM.—Very busy these days at the University, but can be heard very often on 20 or 40. Does the e.c. xmtr ever wander, Charlie? We wonder.

7PA.—Not heard often, but Peter is often tied by shift work, and consequently is on the air when most of us are hard at work.

7AL.—Heard c.q. testing on 40 during Yank test. Couldn't you read the naval on's fist. Tom? (Hi!)

7CT.—Terry will, by the time these notes go to press, be on the air with a crystal-controlled rig. Will be using a vibrator unit for his dc. supply. Promises to be responsible for the come-back of at least four old members. Fb. om.

7AA.—Pop entertained two naval ops from the "Canberra" recently. All had a fine time, we believe examining the gear which our president constructed when wireless was in its infancy here.

7JB.—Finding VIC weather most agreeable (?). Wishes to be remembered to all old friends in Tas.

7YL.—Wondering if the rumour that a certain VK3 C.W. man has purchased a new mike, valued at fourteen of the best. is correct.

#### NORTHERN ZONE. (By VK7LZ.)

No further meeting of the zone has been held since the last notes were written for this column. However, we have received word from the State secretary that all our proposals, namely, The Northern Zone to consist of all Tasmania north of Conara.

The handling in bulk of our QSL cards. . That the Northern Zone be self supporting, have been accepted by State headquarters. The April meeting of the zone will be held at the Y.M.C.A. Launceston, at

8 p.m. on 27th April, and if any "out of town" zone members are in Launceston at that time we would be glad if they would attend the meeting.

The W-VE contest has just concluded and zone members heard calling test were 7KR, 7GJ, 7DS and 7LZ. 40 metres seemed to be the most active band at night here with the W's and VE's coming through weil. Other countries heard were J, XU, JS, VK9, PK1-4, VU, VS6, and VS7. Next time 20 is poor why not give 40 a chance.

Isn't there any active amateurs out of Launceston these days? Judging by the answer to my appeal for letters regarding their activities, it seems as though the answer is definitely NO.

7GJ is busy here rebuilding.

7RK.—Heard on 20 chasing DX and hopes to be on more when I have returned all his gear that I've borrowed from him.

7KR. — Busy with secretarial duties, but manages to work a few

between times.

7CL.—Gets home from Devonport some week-ends and heard on 20 metre phone chasing DX and rag-chewing.

7AB.—Sorry to hear, Doug, of your wife's illness. Hope to hear you on mare again soon.

7DS.—Just worked his first DX station. Congratulations. Hugh.

7QZ.—Now building an all-band exciter unit for flexibility and easy band changing.

7LZ.—Just finished W-VE contest as no one else except W's wanted to QSO—at times it seemed as though they didn't want to either.

7BQ.—Just arrived back from a cruise to Sydney and Brisbane.

No news from 7LC, 7CJ, 7LG or 7AM.

#### New Guinea Notes

(By VK9VG.)

9DK.—Ernie is using his new rig (cl. trict 807 final input 17 watts) and is taking on allcomers. Wrkd VU, K7 es lots of W's. Was doing some wrk on the rig hr es hrd W7DX calling cq at 2 p.m., but as condx hr were not so good did not call him. Next thing he was qso Ernie es telling him he was the best VK9 fone he had ever hrd. Reached down es pulled up both socks and threw the

rig on the air but had to dash off to wrk before he had finished with DK. Ernie puts great faith in his two half waves in phase but has a rotary in mind.

9BW.—Has shifted again and is now at Bulolo, but as far as I know is not on the air. The secrecy you chaps maintain about your doings is amazing and helps the dx notes a lot. Has the 110 volts got you tricked, om?

9WLi.—In last month's notes we left Laurie on the verge of giving up ham radio es taking to raising chickens (or was it home-brew?), but the trouble in the rig was located in an open input tranny and he was on the air again for a few days. Then his modulation tranny went es I guess the first batch of chickens or bh is well on the way.

9RC.—Had a letter from Ron es he tells me his gear is giving a lot of trouble. His xmitr went on the ice and then his RF receiver gave up the job and then the broadcast xx petered out. All with the same complaint, "tropicalitis," which is the same as measles, but you can't see the "spots." You chaps down on the coast sure have a tough time trying

to keep your gear dry.

9MC.—Don't know what "Wewak
Willie" is doing these days, as I
haven't had time to get on the 40
metre rag chews, but last time hrd
was putting in an R9 sig es fb fone
too. Never hrd you on 20 mx and
you should put out a good sig there
too oc. Let's have the dope on it
some time Bill.

9GW—Too busy for ham radio these days, but will be on again soon at his new QRD. Hurry up, George, we can't let DK get away with all the pickings.

9XX.—Large chunks of silence from Basil. He must have heard the rumor that the capital is to be shifted es dismantled the rig in readiness. With 9GW away es off the aid the Rabaul BCL's must have very little to listen to. Anyway, let's hear from you, oc, even if you only write over for the loan of a few tubes.

9RM.—On the air and doing good work. Will answer all calls and has 500 fb crds just waiting for new owners. He tells me he sat up all last Sat. night es only had one QSO and I can quite believe it seeing him next day. Never mind, Peter, when you have been in a few DX contests you will find it is just as easy to call cq asleep as when you are awake. Most chaps only wake up now and then to sign their call.

9DM.—Still waiting for the new rig to arrive, but heard sometimes on 40 on Sundays when off work. Last time hrd was all for 56 mc wrk. Good on you, Dudley, and let's hear more about that idea oc. I've used all the gear I had for 56 mc rig in other rigs, but will soon get some more if some of you chaps will get down to it. With 9BW in Bulolo now we should be able to do something. Before it would have been much better to get up on top of a mountain with a couple of flags.

9VG .- Condx are improving a bit now and dx is coming in again and the new NC101X arrived safely, so all is well. Had a VK9 meeting in the shack a few weeks ago 9WL, 9BW es 9RM present es the rest of the VK9's standing by over the air. Sat up all night wrkg dx. or rather trying to. Got a good hearing from KA's, who seemed to think it was an endurance test. At 2.30 a.m. very little dx was coming in es after calling cq a few times with no reply we asked KA1JP to stand by while we called cq es tell us if anyone came back we were not hearing. Back came a W6 with an fb sig es talking to KA1JP later he said he thought we were putting a "rough" one over as he could not hear the Around about 5.30 a.m. 9RM decided to start building his rig es dragged us all into it. Ur humble picked on the pwr pack as that looked the easiest but drilling and cutting holes in aluminium chassis is not the best of jobs after an ill night sitting, so at around 8.30 I crept away quietly to the bunk, to find 9WL had beaten me to it by about ten minutes. 9BW carried on for a while es then pulled the switch too es left 9RM like the boy on the burn-"When all but he ing deck. fled." About 2.30 p.m. someone awoke and called cq es back came VK4VD R9, and the set on full bore. If you chaps will let me know in plenty of time when you are going to stage another convention I'll go bush for a few days.

# Just a Reminder!

Some of our transformer customers have been surprised to find that we manufacture steel chasses and cabinets — and some of our sheet metal customers didn't know, until recently, that we make transformers.

The following are all completely manufactured by us:-

- Power transformers and chokes up to the largest air cooled sizes.
- All types of audio and modulation transformers.
- High fidelity astatically wound audio transformers on nickel-fron cores
- Nickel iron alloy shields for transformers cathode ray tubes, etc., etc., for reducing pick-up from external fields.
- Standard and special steel chasses, cabinets, loud speaker flares, etc.
- Special transformers and chokes for every application.
- · Relay racks, table and floor microphone stands.
- · Special finishes in enamels and lacquers.

When writing or calling for a quotation, please submit a full-size drawing of the chassis or cabinet, complete with all holes. Delivery of special sheet metal lines is normally given within 10 days.

HARRY CLIFF, VK3HC.

MANUFACTURED BY

## TRIMAX TRANSFORMERS

29-35 FLEMINGTON ROAD, NORTH MELBOURNE. PHONES—F1846, F2550.

#### Hamada

BRIGHT Star Radio, Glen Iris,
Vic. A few 40 metre x cut
Crystals are available at 15/- cash.
These crystals range in size from
about ½in. to ¾in.

COMPLETE 50 Watt Xmitter, fone or C.W., rack and panel, welded chassis, separate large power supplies for C.O., P.A. and mod., New 1014 Mike ready for 20 or 40 metres, well built, accessories valued £10, complete £30. Cawoood, 119 Macpherson st., Waverley N.S.W. FW4589, (VK2ALC.)

CRYSTALS, Accuracy .03%, 80 metre x cut, 10/-; 80 metre AT cut, 17/6; 40 metre x cut, £1/5/-; 40 metre BT cut, £1/5/-. Obtainable from Messrs. A. E. Harold, 123-125 Charlotte st. Brisbane.

POR Sale. Complete 240 volt a.c. power unit, consisting of 5/8 h.p. petrol engine, 12 volt 300 watt de generator and 240/250 volt 500 watt and is practically new. Running ac generator. Is in perfect order costs are low. Am compelled to sell owing to being out of work. Will accept £30. Buyer pays freight. Apply C. P. Singleton (VK4UX), 14 Caroline street, Rockhampton.

WANTED, position as Radio Serviceman, have own testing gear and tools. Familiar with all types of radio sets. C. P. Singleton, 14 Caroline street, Rockhampton.

We are in a position to quote for the construction of—

TRANSMITTERS

AMATEUR BAND COMMUNICATION RECEIVERS.

MODULATORS.

POWER SUPPLIES OF ALL TYPES.

SIGNAL SHIFTERS with output at 40 or 20 metres, 15 M.A. drive at 14,000 K.C.

Will shift your frequency over the major portion of the  $14,000\,$  K.C. band.

May be coupled into a buffer or will excite such finals as those employing 807 single or push-pull.

All complete in metal case with power supply built in.

Can be supplied with Crystals included at any named frequency.

#### CRYSTALS.

Kinsgley "ACURACUT" Crystals—All mounted in holder complete:—

	X Cut.	Zero Drift.				
Band.	Price.	Price.				
160M.	22/6	25/-				
80M.	17/6	25/-				
40M.	32/6	32/6				

Ground to any frequency.

## KINGSLEY RADIO PTY. LTD. 316 LITTLE COLLINS STREET, MELBOURNE.

Factory: 247-251 Spring Street, Melbourne. Cent. 8461.



# **QSL** CARDS

Printed in one or two colors on White or Tinted Board.

Any design or combination of colors.—Make your QSL's express personality.

## COMPLETE PRICES. ONE COLOR Ink. on White or

Prompt, Efficient Attention.

Write, enclosing copy and remittance to—

## ELSUM PRINTING COY.

1025-7 WHITEHORSE ROAD, E.11, MELBOURNE.